



Climate change, mortality, and adaptation: Evidence from annual fluctuations in weather in the US

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Year: 2011
Journal: American Economic Journal. Applied Economics. 3 (4): 152-185

Abstract:

Using random year-to-year variation in temperature, we document the relationship between daily temperatures and annual mortality rates and daily temperatures and annual residential energy consumption. Both relationships exhibit nonlinearities, with significant increases at the extremes of the temperature distribution. The application of these results to "business as usual" climate predictions indicates that by the end of the century climate change will lead to increases of 3 percent in the age-adjusted mortality rate and 11 percent in annual residential energy consumption. These estimates likely overstate the long-run costs, because climate change will unfold gradually allowing individuals to engage in a wider set of adaptations.

Source: <http://dx.doi.org/10.1257/app.3.4.152>

Resource Description

Climate Scenario :

specification of climate scenario (set of assumptions about future states related to climate)

Special Report on Emissions Scenarios (SRES), Other Climate Scenario

Special Report on Emissions Scenarios (SRES) Scenario: SRES A2

Other Climate Scenario: SRES A1F1

Exposure :

weather or climate related pathway by which climate change affects health

Precipitation, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Climate Change and Human Health Literature Portal

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Injury

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Model/Methodology:

type of model used or methodology development is a focus of resource

Cost/Economic, Outcome Change Prediction

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children, Elderly

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Long-Term (>50 years)

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content